REMARKS

This response is filed to place the above-captioned application in condition for allowance. Claims 1-7 are pending in the patent application. Claims 1, 3, 5, 6 and 7 have been amended. Claim 4 has been canceled without prejudice or disclaimer. Claims 8-15 have been added. Additionally, the specification and the drawings have been amended. Furthermore, an Information Disclosure Statement is submitted with this response. No new matter has been added by this response.

Claims 1-7 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Patent Office states that the claim should clearly state where the salient line and the reentrant line are. Applicants have amended the claims to remove the indefinite terms. Applicants also amended the drawings to clarify the subject matter of the claims. The specification has been amended to be consistent with the amended drawings. No new matter has been added by these amendments.

Claim 4 is objected to under 35 U.S.C. § 102(b) as being fully anticipated by U.S. Patent No. 5,970,027 to Narita et al. ("*Narita*"). Claim 4 is also rejected under 35 U.S.C. § 102(b) as being anticipated by WO 99/52105 to Edwards ("*Edwards*"). Applicants have cancelled claim 4. Applicants therefore submit that the rejections of claim 4 are now moot.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Edwards* in view of 6,120,870 to Nebashi et al. ("*Nebashi*") and Japanese document no. JP 02-010536 to Takahashi et al. ("*Takahashi*"). Applicants disagree with and traverse this rejection for the following reasons.

Amended claim 1 is directed to a process for production of an optically diffractive structure including a surface configuration having a corrugation-like shape including a plurality

of peak-like shapes and valley-like shapes. The process includes providing a duplication plate material having a surface configuration including a corrugation-like shape including a plurality of peak-like shapes and valley-like shapes, pressing an optically diffractive layer made of ionizing radiation curable resin with the duplication material under a heating or non-heating condition to impart a surface configuration having the corrugation-like shape to the optically diffractive layer and curing the optically diffractive layer with ionizing radiation after and/or upon providing the surface configuration. The combination of *Edwards*, *Nebashi* and *Takahaski* do not disclose or suggest the subject matter of amended claim 1.

Edwards, *Nebashi* and *Takahaski* are each directed to optical disks or storage devices for writing data to the disk and reading data stored on the disk. Specifically, *Edwards* is directed to reverse optical mastering for data storage disks. In *Edwards*, the master substrate is at least partially covered with a layer of photosensitive material 30. The surface relief pattern is recorded in the data storage master disk including the steps of exposing and developing the photosensitive material. The exposing and developing of the specified thickness of the photosensitive material is controlled to form the master grooves extending down to the substrate. (See the Abstract). The master disk and a disk made from a master disk are used to store information such as data. Such disks enable data to be written to the disk or read from the disk via a laser which is reflected from the surface of the disk. (*Edwards*, page 14, lines 6-30). Because the disks in *Edwards* have reflective surfaces, *Edwards* does not disclose or suggest at least the step of "pressing an optically diffractive layer made of an ionizing radiation curable resin on the duplication plate material" because having such an optically diffractive layer would cause the laser light that reads or rights to the disk to diffract or pass through the surface of the disk instead of reflecting from the disk. Furthermore, the optically diffractive layer includes an

ionizing radiation curable resin which is a separate element. Conversely, *Edwards* discloses a photosensitive material but does not disclose an optically diffractive layer including such material.

Similarly, *Nebashi* is directed to an optical disk and a method of making such a disk. Specifically, *Nebashi* states that the optical disk (for reproduction use only) is produced by first forming a "reflective film" and then a protective film for protecting the reflective film on the substrate 101. (Col. 6, lines 35-48). *Nebashi* therefore includes a reflective film on the substrate. As stated above, the reflective film will reflect a laser directed at the substrate to enable the reading and writing of the disk. *Nebashi* does not disclose or suggest pressing an optically diffractive layer on the substrate that includes an ionizing radiation curable resin. The reflective layer of *Nebashi* does not diffract any light from its surface.

Nebashi is also directed to the manufacture of optical disks. As stated above, such optical disks reflect light from the surface to enable data stored on the disk to be written and/or read to and from the disk. Thus, *Nebashi* does not disclose or suggest pressing an optically diffractive layer made of an ionizing curable resin in a duplication plate material as in the claimed invention.

Based on the above, neither *Edwards*, *Nebashi* or *Takahaski* when taken alone or in combination, discloses or suggests the process for producing an optically diffractive structure including at least the step of pressing an optically diffractive layer on a duplication plate material as in the claimed invention.

For at least these reasons, Applicants submit that amended claim 1 and claims 2-3 and 8, 10, 12 and 14, which depend from amended claim 1, are each patentably distinguished over the combination of *Edwards*, *Nebashi* and *Takahaski* and in condition for allowance.

Claim 4 is rejected under U.S.C. § 102(e) as being anticipated by U.S. Publication No. 2003/0197906 to Furuta et al. ("*Furuta*"). As stated above, Applicants have canceled claim 4. Therefore, the rejection of claim 4 in view of *Furuta* is now moot.

Claims 1-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,892,385 to Webster Jr. et al. ("*Webster*") and U.S. Patent No. 4,576,850 to Martens ("*Martens*"). Applicants disagree with and traverse this rejection for the following reasons. *Webster* is directed to a sheet-like material authentication item that includes a substrate bonded to a sheet material. The substrate includes a reflective diffractive structure formed as a relief pattern on a viewable surface. *Webster* does not disclose or suggest pressing an optically diffractive layer made of a curable resin onto a duplication plate material, peeling the cured optically diffractive layer from the duplication material and then curing the optically diffractive layer with ionizing radiation as in the claimed invention. The reflective diffractive structure in *Webster* remains attached to the authenticated item 100.

Martens is directed to shaped plastic articles having replicating microstructure surfaces. The microstructural surfaces are prepared by the process of filling a master mold, bearing or encoding the microstructure to be replicated with a fluid castable one-part composition. (See the Abstract). *Martens* states that the resulting cast composition is exposed to radiation to form the article. *Martens* does not disclose or suggest pressing an optically diffractive layer onto a duplication plate material, curing the diffractive layer and then peeling the cured diffractive layer from the duplication plate material as in the claimed invention. Therefore, neither *Webster* nor *Martens* nor the combination of *Webster* and *Martens* discloses or suggests the subject matter of the claimed invention.

For at least these reasons, amended claim 1 and claims 2-3 and 8, 10, 12 and 14, which depend from amended claim 1, are each patentably distinguished over the combination of *Webster* and *Martens*.

Claim 5 is directed to a medium having an optically diffractive structure which includes similar elements to amended claim 1. Applicants therefore submit that amended claim 5 and claims 6, 7, 9, 11, 13 and 15, which depend from amended claim 5, are each patentably distinguished over the combination of *Edwards*, *Nebashi* and *Takahashi* and the combination of *Webster* and *Martens* for the reasons provided above with respect to amended claim 1. Applicants therefore submit that amended claim 5 and the claims that depend therefrom are each patentably distinguished over the cited references or any combinations therein and in condition for allowance.

New claims 8, 10, 12, and 14 depend from amended claim 1 and new claims 9, 11, 13 and 15 depend from amended claim 5. Therefore, Applicants submit that these claims are patentable over the cited references for at least the reasons provided above with respect to amended claims 1 and 5. Applicants therefore submit that new claims 8-15 are in condition for allowance.

All claims in the present application are believed to be in condition for allowance. The amendments presented herein as stated above do not introduce new matter as they serve to clarify certain elements of the claims in accordance with some of the Examiner's suggestions as well as Applicant's own ideas for amendment. It is requested that the amended claims be looked upon favorably especially in view of the distinguishing and supportive arguments provided herein. In view of the aforesaid, Applicants respectfully request an early indication of Allowance.

Conclusion

For all of the above reasons, Applicants submit that the specification and claims are now in proper form, and that the claims are patentable over the art or record. Therefore Applicants respectfully request issuance for this case at the Patent Office's earliest convenience.

Respectfully submitted

Date: 8-16-06

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CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: 8-16-06

RoseAnn White

ANNOTATED DRAWING SHEETS

FIG. 2A

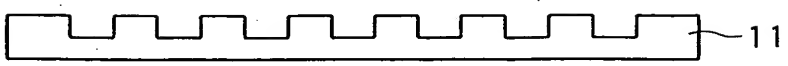


FIG. 2B

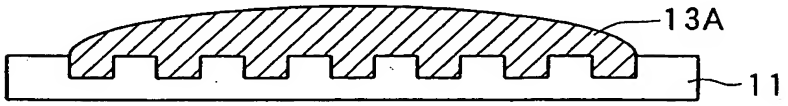


FIG. 2C

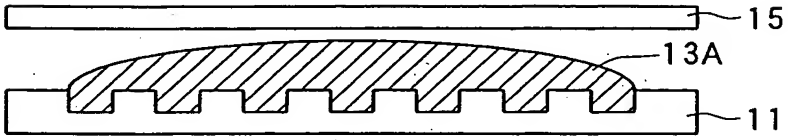


FIG. 2D

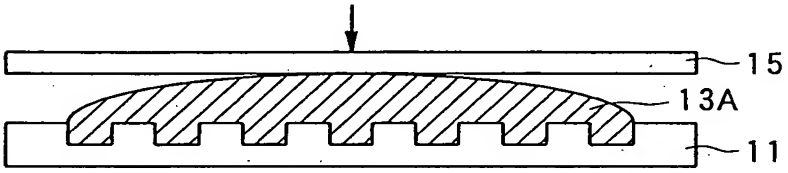


FIG. 2E

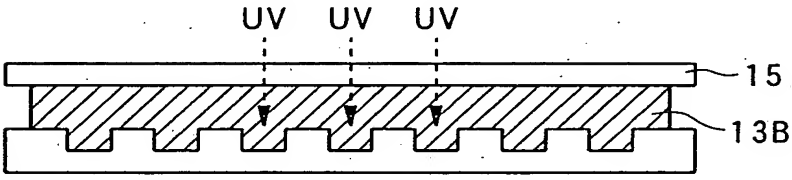


FIG. 2F

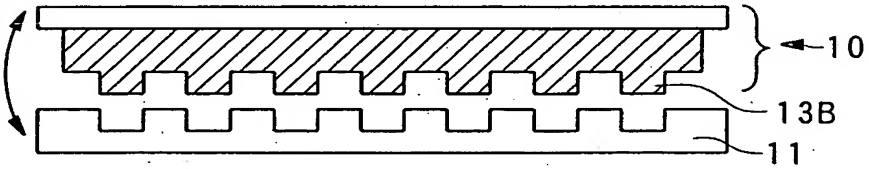


FIG. 3

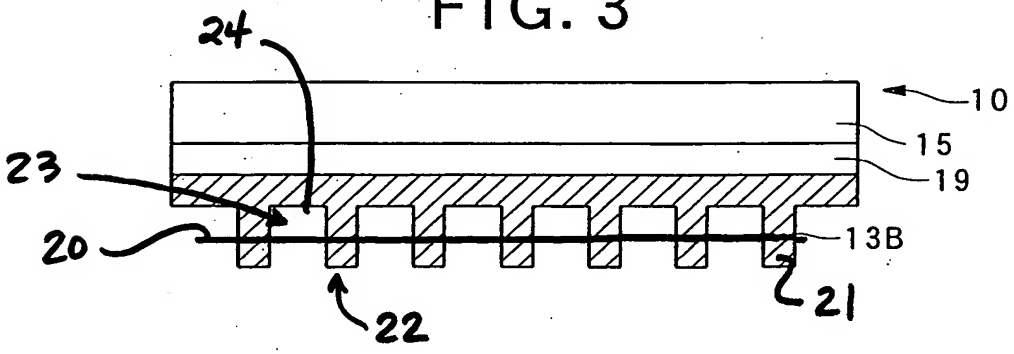


FIG. 4A

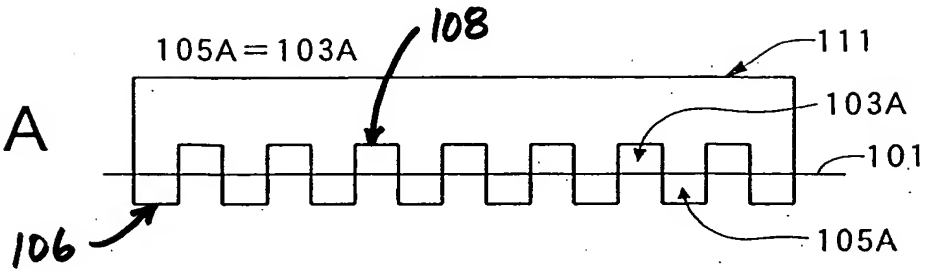


FIG. 4B

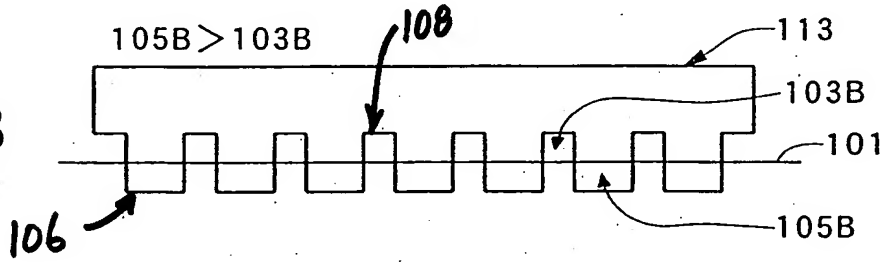


FIG. 4C

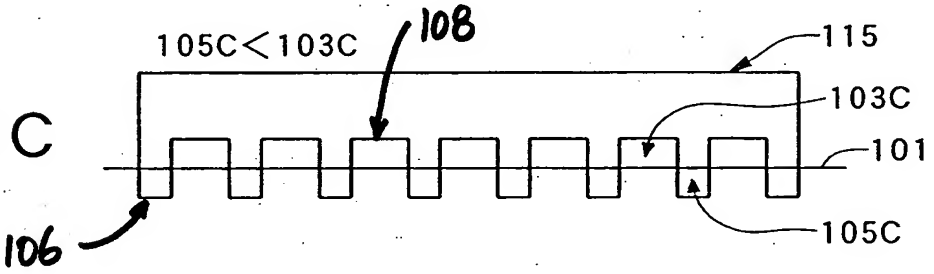


FIG. 5A

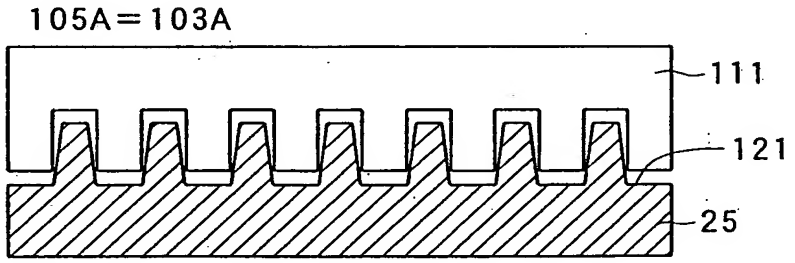


FIG. 5B

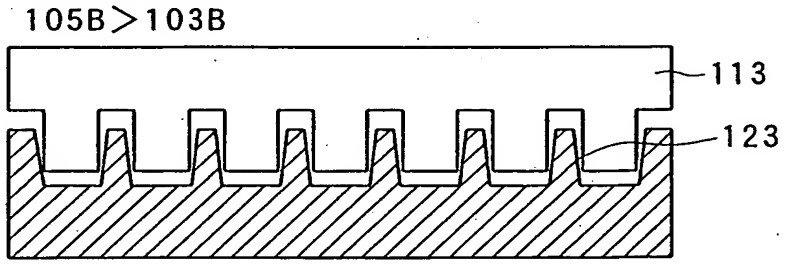
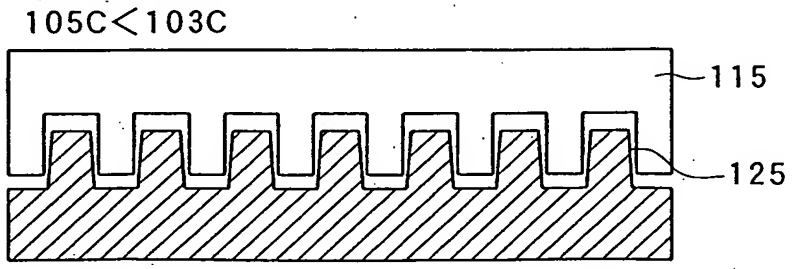


FIG. 5C



AMENDED DRAWING SHEETS